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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,021	11/12/2003	Arnaud Fausse	09669/009002	6206

7590 09/07/2007
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Houston, TX 77010

EXAMINER

REZA, MOHAMMAD W

ART UNIT	PAPER NUMBER
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2136

MAIL DATE	DELIVERY MODE
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09/07/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/706,021

Applicant(s)

FAUSSE, ARNAUD

Examiner

Mohammad W. Reza

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 7-16 are presented for examination.

Claim Objections

2. Claims 14-15 objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. Claims 14, and 15 should be depend on claim 13 not on claim 7.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 7 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this claim applicants mention "protected device" which is generally narrative and indefinite with the invention. The general meaning of "protected device" is "a device which is protected". However, the function of this claimed device is totally different than this normal meaning. This device is performing cryptographic function for storage device. So, by calling it as a "protected device" applicant raised confusion to properly understanding the claim. Applicants do not point out clearly which options include in the present invention by all these terms. The office will interpret this

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words with the regarding claims as best understood for applying the appropriate art for rejection purposes.

4. Claim 16 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In this claim applicants mention "an "uncertain" message storage device", "a closed environment considered as "certain"", "a uncertain zone", and "certain zone" which is generally narrative and indefinite with the invention. Applicants do not point out clearly which options include in the present invention by all these terms. The office will interpret these words with the regarding claims as best understood for applying the appropriate art for rejection purposes.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.

When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).

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In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

5. Claims 7-16 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 7-16 are drawn to "a device", "Microprocessor Card", "Box" whose claimed elements are described in the following dependent claims and specification as being "Software". For example, in the following dependent claims of all the above mentioned independent claim describes all those "device", "Microprocessor Card", and "Box" as "authentication device according to claim 7, characterized in that the only logic link between the commands/data circulating between said protected device and said storage device on one hand and data circulating between said protected device and said display device on the other hand, is the software (claim 8)", "microprocessor card according to claim 10, characterized in that the only logic link between the commands/data circulating between said microprocessor card and said storage device on one hand and data circulating between said microprocessor card and said display device on the other hand, is the software (claim 11)", and "box characterized in that the only logic link between the data circulating in the data/commands and display circuits is the software (claim 16) . So, The "device", "Microprocessor Card", and "Box" of claims 7, 10, 13, and 16 are described in the dependent claims, and specification as being software only. "Functional descriptive material consists of data structures and, computer programs which impart functionality when employed as a computer component." (MPEP 2106). When functional descriptive material is recorded on some computer-readable medium it

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becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. See *Lowry*, 32 F.3d at 1583-84, 32 USPQ2d at 1035. . In this claim the function of the program is just software not any hardware. Compare *In re Lowry*, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure **stored** on a computer readable medium that increases computer efficiency held statutory) and *Warmerdam*, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure **stored in memory** held statutory product-by-process claim) with *Warmerdam*, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory). Such claimed data structures do not define any structural and functional interrelationships between the data structure and other claimed aspects of the invention which permit the data structure's functionality to be realized. Similarly, computer programs claimed as computer instructions per se, i.e., the descriptions or expressions of the programs, are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer which permit the computer program's functionality to be realized. Accordingly, it is important to distinguish claims that define descriptive material per se from claims that define statutory inventions. So, it does not appear that a claim reciting software with functional descriptive material falls within any of the categories of patentable subject matter set forth in § 101.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 7-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masatoshi Kimura hereafter Kimura (US patent 5237609) in view of Holger Sedlak hereafter Sedlak (US Patent 6510514).

7. As per claim 7, Kimura discloses authentication device of a message comprising a message storage device, a protected device connected to said storage device, a display device connected to said protected device, characterized in that the protected device is constituted by a microprocessor card provided with inputs/outputs I1/01 of commands/data for the link with said storage device and I2/02 of display for the link with said display device (col. 4, lines 4-25, col. 6, lines 2-39). He does not explicitly disclose that they are physically separate. Kimura discloses the main concept of this claim limitations though, Sedlak's teachings give a better understand in combination with Kimura to explain the steps of this claim limitations. Specially, Sedlak's figure carries a significant similarity of the present application to show the invention's limitation in general. Sedlack discloses how a protected device located in between the storage device and display device and connected through a physically separated input/output link (figure, col. 2, lines 19-54, col. 3, lines 3-25).

Accordingly, it would been obvious to one of ordinary skill in the network security art at the time of invention was made to have incorporated Sedlak's teachings of a protection device connected with a storage device and a displaying device has separate input/output link with the teachings of Kimura, for the purpose of suitably using the two

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physically separated links connected with two different devices to generated the authentication message (col. 2-4).

8. As per claim 8, Kimura discloses authentication device characterized in that the only logic link between the commands/data circulating between said protected device and said storage device on one hand and data circulating between said protected device and said display device on the other hand, is the software of said protected device (col. 4, lines 4-25, col. 6, lines 2-39). Kimura discloses the main concept of this claim limitations though, Sedlak's teachings give a better understand in combination with Kimura to explain the steps of this claim limitations. Specially, Sedlak's figure carries a significant similarity of the present application to show the invention's limitation in general. Sedlack discloses how a protected device located in between the storage device and display device and connected through a physically separated input/output link to performs that the only logic link between the commands/data circulating between said protected device and said storage device on one hand and data circulating between said protected device and said display device on the other hand, is the software of said protected device (figure, col. 2, lines 19-54, col. 3, lines 3-25).

The same motivation that was utilized in the combination of claim 7 applies equally as well to claim 8.

9. As per claim 9, Kimura discloses authentication device characterized in that said display device is a printer, a screen, or a filing device (col. 4, lines 4-25, col. 6, lines 2-39).

10. As per claim 10, Kimura discloses microprocessor card able to be connected to a message storage device and to a display device, characterized in that it is provided with inputs/outputs I1/01 of commands/data for the link with said storage device and I2/02 of display for the link with said display device (col. 4, lines 4-25, col. 6, lines 2-39). He does not explicitly disclose that they are physically separate. Kimura discloses the main concept of this claim limitations though, Sedlak's teachings give a better understand in combination with Kimura to explain the steps of this claim limitations. Specially, Sedlak's figure carries a significant similarity of the present application to show the invention's limitation in general. Sedlack discloses how a protected device located in between the storage device and display device and connected through a physically separated input/output link (figure, col. 2, lines 19-54, col. 3, lines 3-25).

The same motivation that was utilized in the combination of claim 7 applies equally as well to claim 10.

11. As per claim 11, and 12 Kimura discloses microprocessor card characterized in that the only logic link between the commands/data circulating between said microprocessor card and said storage device on one hand and data circulating between said microprocessor card and said display device on the other hand, is the software of said card characterized in that it comprises a physically separate inlet to enter a confidential code (col. 4, lines 4-25, col. 6, lines 2-39). He does not explicitly disclose that they are physically separate. Kimura discloses the main concept of this claim limitations though, Sedlak's teachings give a better understand in combination with Kimura to explain the steps of this claim limitations. Specially, Sedlak's figure carries a significant similarity of the present application to show the invention's

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limitation in general. Sedlack discloses how a protected device located in between the storage device and display device and connected through a physically separated input/output link (figure, col. 2, lines 19-54, col. 3, lines 3-25).

The same motivation that was utilized in the combination of claim 7 applies equally as well to claim 11, and 12.

12. As per claim 13, Kimura discloses box able to receive a protected device and able to be connected to a message storage device and to a display device, characterized in that it comprises a data/command circuit for the link with said storage device and a display circuit for the link with said

display device, the inlets/outlets of said data/command circuit and said display circuit (col. 4, lines 4-25, col. 6, lines 2-39). He does not explicitly disclose that they are physically separate. Kimura discloses the main concept of this claim limitations though, Sedlak's teachings give a better understand in combination with Kimura to explain the steps of this claim limitations. Specially, Sedlak's figure carries a significant similarity of the present application to show the invention's limitation in general. Sedlack discloses how a protected device located in between the storage device and display device and connected through a physically separated input/output link (figure, col. 2, lines 19-54, col. 3, lines 3-25).

The same motivation that was utilized in the combination of claim 7 applies equally as well to claim 13.

13. As per claim 14, and 15 Kimura discloses box characterized in that the only logic link between the data circulating in the data/commands and display circuits is the software of said protected device, characterized in that it comprises a keyboard allowing to enter data, such as a confidential code (col. 4, lines 4-25, col. 6, lines 2-39).

14. As per claim 16, Kimura discloses authentication device of a message, comprising an "uncertain" message storage device, a protected device connected to said storage device, a display device connected to said protected device and constituting a closed environment considered as "certain", characterized in that said protected device is constituted by a microprocessor card and said microprocessor card is forming a bridge between an uncertain zone, said storage device and a certain zone, said display device. Kimura discloses the main concept of this claim limitations though, Sedlak's teachings give a better understand in combination with Kimura to explain the steps of this claim limitations. Specially, Sedlak's figure carries a significant similarity of the present application to show the invention's limitation in general. Sedlack discloses how a protected device located in between the storage device and display device and connected through a physically separated input/output link to performs that comprising an "uncertain" message storage device, a protected device connected to said storage device, a display device connected to said protected device and constituting a closed environment considered as "certain", characterized in that said protected device is constituted by a microprocessor card and said microprocessor card is forming a bridge between an uncertain zone, said storage device and a certain zone, said display device (figure, col. 2, lines 19-54, col. 3, lines 3-25).

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The same motivation that was utilized in the combination of claim 7 applies equally as well to claim 16.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

15. Claims 7, 10, 13, and 16 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3, 6 of U.S. Patent 7039808. Although the conflicting claims are not identical, they are not patentably distinct from each other because: It would have been obvious to claim the method, system or device/apparatus broader in order to obtain the most commercially

viable form of invention or in order to obtain the broadest protection for invention thereby securing commercial viability.

Independent Claim 7 of the instant application recite identical limitations as claims 1, 3, and 6 of the published application (see the claim comparison table below):

Claim 7 of the present application: Authentication device of a message comprising a message storage device, a protected device connected to said storage device, a display device connected to said protected device, characterized in that the protected device is constituted by a microprocessor card provided with inputs/outputs I1/O1 of commands/data for the link with said storage device and I2/O2 of display for the link with said display device, physically separate.

Claim 1, 3, 6 of the patent 7039808 recites:

Claim 1, Method for checking the signature of a message, the message, signature and a certificate having been sent by a signer having a public key to a recipient having a message storage device, characterised in that it comprises stages according to which: the message, signature and certificate are loaded from the **storage device onto a protected device connected to said storage device of the recipient**, the certificate in the protected device is checked within the protected device by means of a public key of a reliable third party associated with said certificate, and at least one data element of the result of checking is transmitted to a **display device connected directly**

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to the protected device, the result data element is checked on the display device, when the certificate is verified, a reduction of the message is calculated in the protected device and the message is recopied onto the display device during the reduction operation, the signature with the public key of the signer are decrypted in said protected device, the signature decrypted is compared with the carried out reduction, and according to the result of this comparison, a message is sent from the protected device to the display device indicating that the signature conforms/does not conform to the message or the public key of the signer put forward.

Claim 3, Checking method according to claim 1, characterised in that said **protected device is constituted by a microprocessor card placed in a box connected firstly to said storage device, and secondly to said display device.**

Claim 6, Checking method according to claim 1, characterised in that the **protected device comprises firstly a commands/data interface circuit embodying a link with the storage device, and secondly a display interface circuit embodying a link with the display device, said circuits being physically independent.**

Conclusion

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad w. Reza whose telephone number is 571-272-6590. The examiner can normally be reached on M-F (9:00-5:00).


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, MOAZZAMI NASSER G can be reached on (571)272-4195. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Mohammad Wasim Reza

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